

## ABSTRACT OF THE DISCLOSURE

An apparatus for ultrasonically detecting an edge of a web, includes a ultrasonic-wave transmitter transmitting ultrasonic-wave pulse train, a  
5 ultrasonic-wave receiver receiving the ultrasonic-wave pulse train and converting the received ultrasonic-wave pulse train into electric signals, the web being fed between the ultrasonic-wave transmitter and receiver, a rectifying circuit for rectifying the electric signals, a low-pass filter circuit for smoothing output signals transmitted from the rectifying circuit, a first sample-holding circuit for  
10 sampling an output signal transmitted from the low-pass filter circuit, at first timing, a second sample-holding circuit for sampling an output signal transmitted from the low-pass filter circuit, at second timing later than the first timing, a third sample-holding circuit for sampling an output signal transmitted from the first sample-holding circuit, at the second timing, and a differentially  
15 amplifying circuit for calculating a difference between output signals transmitted from the second and third sample-holding circuits.